

REMARKS

Applicants would like to express their appreciation for the courtesies extended by the Examiner during the telephonic interview of August 9, 2006 ("Interview"). Based on the discussion which took place during the Interview, it is believed that the amendments to the claims, which clarify that the applicants are not attempting to claim the human agent, will allow the applicants to reach an agreement with the Examiner regarding allowable subject matter. The remarks set forth below address, in detail, how the amendments clarify the patentability of the present claims, even in light of U.S. 5,963,939 ("McCann"), a reference cited in the Final Office Action mailed April 17, 2006 ("Final Office Action") as anticipating the claims in their unamended state. Those remarks begin by addressing the rejections in the Final Office Action based on section 101, move onto the rejections based on section 112, and conclude with the rejections based on McCann.

**In Light of the Amendments, the Current Claims Are Directed to Patentable Subject Matter Under Section 101**

The Examiner contended, in both the Interview and the Final Office Action, that the claims may be interpreted as encompassing a human being and, therefore, are directed to non-statutory subject matter under section 101. During the Interview, the Examiner indicated that the claims being directed to non-statutory subject matter was the primary obstacle to reaching an agreement with the applicants. The Examiner also indicated that if the claims were amended to clarify that they are directed to an expert system, rather than to a live human being, that that obstacle would be removed. Consequently, applicants have amended each independent claim to clarify the relationship between the live agent and the expert system, and to clarify that the pending claims do *not* encompass the live agent himself or herself.

**The first independent claim, claim 1, has been amended to make clear that it does not encompass a human being by explicitly stating that the rating of a telecommunications product from the plurality of telecommunications products is calculated by the expert system, not by the live agent, and by stating that an expert system is utilized to determine problem domain information and customer need information.** The particular amendments which make this clear are found in the first and second clauses after the preamble and the final

clause of claim 1. Applicants assert that no new matter has been added by the amendments to claim 1, and that support for those amendments can be found in at least the original version of claim 1, and lines 1 – 10 of page 17 of the application as originally filed.

**The second independent claim, claim 41, has been amended to make clear that it is directed to an expert system, not a human being, by explicitly reciting that the expert system allows a live agent to perform certain acts, rather than claiming the live agent himself or herself.** The particular amendments which make this clear are found in the last and third from last clauses of claim 41. Applicants assert that no new matter has been added by the amendments to claim 41, and that support for those amendments can be found in at least claim 41 as originally filed, as well as lines 13-16 of page 19 of the application as originally filed.

**The third independent claim, claim 46, has been amended to make clear that it is directed to software instructions which determine problem domain information and need information during an interaction between a live human agent and a customer, rather than claiming the live human agent him or herself.** The particular amendments which make this clear are found in the first and second clauses after the preamble of claim 46. Those clauses are now clearly directed to a set of instructions that determines problem domain information, and a set of instructions that determines need information. The amendments clarify that those acts are performed during an interaction between a live human agent and a customer, but the live human agent himself or herself is not claimed in claim 46. Applicants assert that no new matter has been added by the amendments to claim 46, and that support for those amendments can be found in at least claim 46 as originally filed.

**The fourth independent claim, claim 51, has been amended to make clear that it is directed to a plurality of software instructions stored on media, not a human being, by explicitly reciting that a set of software instructions allows a live human agent to use the functionality of the expert system to determine need information, and that a set of software instructions prompts the live human agent, rather than claiming the live human agent himself or herself.** The particular amendments which make this clear are found in the last and third from last clauses of claim 51. Applicants assert that no new matter has been added by the amendments to claim 51, and that support for those amendments can be found in at least claim 51 as originally filed.

**The final independent claim, claim 68, has been amended to make clear that it does not encompass a human being by reciting that the information is obtained from the**

**customer utilizing the expert system, that an interface is presented to allow information to be entered, and that the at least one solution presented to the customer is produced by the expert system.** The particular amendments which make this clear are found in the first and second clauses after the preamble and the last clause of claim 68. Applicants assert that no new matter has been added by the amendments to claim 68, and that support for those amendments can be found in at least the unamended form of claim 68, lines 9-11 of page 6, lines 21-22 of page 11, and lines 1 – 10 of page 17 of the application as originally filed.

**The dependent claims have been amended as necessary to ensure that they are consistent with the amendments described above.** Particularly, applicants note that claim 2 has been amended to clarify that utilizing the expert system to determine the need information of the customer comprises asking questions provided by the expert system and inputting the customer need information into the expert system via a graphical user interface serviced by an agent computer, which helps to make that claim consistent with claim 1's clarification that the need information is determined utilizing the expert system. Applicants submit that no new matter is introduced by the amendments to claim 2, and that support for those amendments can be found in at least line 21 of page 11 of the application as originally filed. Applicants assert that none of the remaining amendments to the dependent claims introduce new matter, and that support is provided by the claims as originally filed and the sections cited above regarding the independent claims. Therefore, applicants respectfully request that each claim rejection based on section 101 be withdrawn, as it is now clear that all claims are directed to patentable subject matter.

#### **In Light of the Amendments, the Current Claims Meet the Requirements of Section 112**

Claim 1 has been amended to comply with the requirement of particularly pointing out and distinctly claiming the subject matter of the invention. The Final Office Action, page 3, rejected claim 1 under section 112, second paragraph, stating that the application is not clear when indicating that the act of inputting the user need information into the expert system is performed by the live human agent. To clarify, applicants have amended the third clause after the preamble of claim 1 as follows: "inputting the customer need information into the expert system, wherein the act of inputting the ~~user~~ customer need information into the expert system is performed by the live human agent;". Applicants assert that this amendment clarifies the third

clause after the preamble of claim 1 by removing the reference to “the user,” which had not been mentioned in claim 1, with a reference to “the customer,” which was introduced in the first clause after the preamble of claim 1. Applicants assert that no new matter has been added by the amendment to the third clause after the preamble of claim 1, and that support for that amendment can be found in at least claim 1 in its unamended form. Therefore, applicants respectfully request that the rejection of claim 1 under section 112 be withdrawn.

### **Each of the Pending Claims is Patentable Over McCann**

#### **General Remarks Regarding the Relationship of the Expert System and Agent**

As discussed during the Interview, one useful feature of the present invention is that it replaces a skilled human agent with the capabilities of an expert system in a customer interaction. Applicants note that allowing an unskilled agent to utilize an expert system to supply necessary knowledge and judgment while interacting with a customer is one of the benefits particularly described in the application as originally filed. Specifically, “a conventional system is limited by the individual ability, expertise, and training of an agent operating within it; certain aspects of the invention provide for a system whose high end performance is not limited by the personal characteristics of the agents that operate it” (page 19, line 22 – page 20, line 2). Applicants assert that this is very different from what is taught in McCann, which specifically states that “the VAR or technical consultant, *of course*, must be familiar with products and services currently available” (col. 1, ll. 65-66) (emphasis added). **As will be discussed in detail below, each of the pending independent claims recites limitations not taught or suggested in McCann that allow an expert system to utilize the live agent to act, in effect, as a conduit between the customer and the expert system’s knowledge and ability. Thus, applicants respectfully request that the rejections of the pending claims in light of McCann be withdrawn.**

#### **Remarks Regarding Claim 1**

Regarding claim 1, applicants note that that the first clause of that claim recites the limitations of “utilizing the expert system to determine problem domain information via interaction between a live human agent and a customer.” Applicants further note that the Final

Office Action asserted that those limitations are taught by McCann's disclosure that "the VAR or technical consultant, of course, must be familiar with products and services currently available." Final Office Action at 3, quoting McCann, col. 1, ll. 65-66. As set forth above, applicants believe that that teaching of McCann is very different from the invention described in claim 1. Particularly, applicants note that a method in which problem domain information is determined *utilizing the expert system* is very different from one which is based on McCann's premise that "the VAR or technical consultant, of course, must be familiar with products and services currently available" because, as set forth above, even a non-skilled human agent can interact with the customer while relying on the knowledge and abilities of the expert system. As an additional illustration of this distinction, applicants particularly draw the Examiner's attention to lines 10-16 of page 19 of the application as originally filed, a passage which reads as follows:

[t]he interactive product selection/recommendation system 100 allows for the ability of an agent of relatively low skill level to provide recommendations to the customer...borrowing on the various functionality of the expert system. The interactive product selection/recommendation system 100 is amenable to providing sales support for the providers 132 *without requiring very highly skilled and trained salespersons.*  
(emphasis added)

Thus, because the reliance on highly trained VARs or technical consultants disclosed in the cited section of McCann does not teach or suggest the novel limitations of the first clause of claim 1, applicants respectfully request that the rejection of claim 1 based on McCann be withdrawn.

#### Remarks Regarding Claims 2-8, 66 and 67

Applicants note that each of claims 2-8, 66 and 67 depends, either directly or indirectly, from claim 1. Consequently, each of those claims incorporates the novel limitations of claim 1. Therefore, for at least the reasons set forth above regarding claim 1, applicants respectfully request that the rejections of claims 2-8, 66 and 67 based on McCann be withdrawn.

#### Remarks Regarding Claim 41

Applicants note that the third from last clause of claim 41 recites that "the expert system comprises computer executable instructions which allow a live human agent to perform selection of an available telecommunications product from the product database based on the rating of the

at least two available telecommunications products during an interaction with a customer.” Applicants additionally note that the Final Office Action asserted that the limitations of the third from last clause of claim 41 were taught by element 400 of Figure 7 of McCann. However, applicants submit that element 400 does not teach or suggest the limitations of the specified clause of claim 41, because that element is identified as a Solution’s *Internal Representation*. Applicants assert that an internal representation is very different from applicants’ claim which recites that the expert system rates at least two telecommunications products using dynamic calculation and is operable to allow a live human agent to perform selection based on those ratings during an interaction with a customer. Applicants note that allowing a live human agent to perform a selection based on the ratings calculated by the expert system during an interaction with a customer allows expert systems within the scope of claim 41 to be used to minimize reliance on knowledgeable technical consultants. As set forth above, McCann assumes that sales staff will be knowledgeable and highly trained, which indicates that McCann does not teach or suggest a system which achieves a significant benefit provided by the system of claim 41.

*Remarks Regarding the Output Recited in Claim 41*

As discussed during the Interview, another feature which distinguishes claim 41 from McCann is that the expert system has output comprising multiple solutions. The second from last clause of claim 41 specifically recites that “the expert system generates output comprising a recommended telecommunications solution *and* a compatible telecommunications solution” (emphasis added), meaning that a reference which teaches generating only one solution as output does not anticipate claim 41. Applicants assert that McCann is just such a reference, and draw the Examiner’s attention to lines 24-25 of column 50 of McCann, which state that “[a]t the end of Phase II, *a single product* has been selected to comply with the requirements and guidelines” (emphasis added). Thus, applicants assert that McCann is actually incompatible with claim 41, and therefore does not teach or suggest the unique output of that claim.

Applicants assert that element 210b, cited in the Final Office Action as teaching the limitations of the second from last clause of claim 41, does not teach the unique output recited in claim 41, and, in fact, does not teach output at all. Turning to McCann, applicants note that lines 42-47 of column 39 indicate that element 210b is a subclass of McCann’s requirements translation base class, and that the subclass is translated in the same way as is depicted in Figure 7 for the base class itself. Applicants further note that Figure 7 of McCann depicts the

requirements translation base class as being treated as input to generate the expert system's internal solution, not as output provided to a human agent. Thus, applicants assert that element 210b of Figure 11B of McCann can not be considered output and consequently does not teach or suggest that the expert system provides "output comprising a recommended telecommunications solution and a compatible telecommunications solution," as is recited in the second from last clause of claim 41.

Therefore, for at least reasons that the prior art disclosure cited in the Final Office Action does not teach or suggest the novel limitations of the second from last and third from last clauses of claim 41, applicants respectfully request that the rejection of that claim based on McCann be withdrawn.

#### Remarks Regarding Claims 42 – 45

Applicants note that each of claims 42-45 depends from claim 41. Consequently, each of those claims incorporates the novel limitations of claim 41. Therefore, for at least the reasons set forth regarding claim 41, applicants respectfully request that the rejections of claims 42-45 based on McCann be withdrawn.

#### Remarks Regarding Claim 46

Applicants note that the first clause after the preamble of claim 46 recites the limitations of "a set of instructions executed by the processing circuitry that determines problem domain information during an interaction between with a live human agent and a customer, wherein the problem domain relates to a telecommunications network configuration." Applicants further note that the Final Office Action cited lines 65 and 66 of column 1 of McCann as teaching the limitations of the first clause after the preamble of claim 46. As set forth above, lines 65-66 of column 1 of McCann describe relying on a knowledgeable VAR or technical consultant. Applicants assert that, for reasons similar to those set forth above, such reliance does not teach or suggest the limitations of the first clause after the preamble of claim 46. Therefore, applicants respectfully request that the rejection of claim 46 based on McCann be withdrawn.

### Remarks Regarding Claim 51

Applicants note that the first clause after the preamble of claim 51 recites the limitations of “a set of instructions executed by the processing circuitry that performs expert system processing to rate at least two available products within a plurality of available products using dynamic calculation and based on a customer need, wherein the products comprise a telecommunications network configuration.” Applicants further note that the Final Office Action cited lines 65 and 66 of column 1 of McCann as teaching the limitations of the first clause after the preamble of claim 51. As set forth above, lines 65-66 of column 1 of McCann describe relying on a knowledgeable VAR or technical consultant. Applicants note that the first clause after the preamble of claim 51 recites instructions which perform expert system processing using dynamic calculation, and that the processing is in no way dependent on a knowledgeable technical consultant. Thus, applicants assert that McCann not only does not teach or suggest the limitations of the first clause after the preamble of claim 51, McCann actually teaches a system which is incompatible with those limitations.

Additionally, applicants note that the second from last clause of claim 51 recites “a set of instructions executed by the processing circuitry that generates output comprising a recommended solution and a compatible solution and presents the output to the live human agent via the graphical user interface.” Applicants further note that the Final Office Action asserted that the limitations of the second from last clause of claim 51 are taught by the following passage, found at lines 18-21 of column 2 of McCann: “the instructions included are often written at a single level of technical sophistication and often require some previous familiarity with the product family.” However applicants submit that this passage, while it does describe instructions, does not specify that a live human agent is presented with output comprising “a recommended solution *and* a compatible solution.” Indeed, applicants note that teaching that instructions are written at a single level of technical sophistication is simply not relevant to whether a system outputs more than one solution to a live human agent, as the number of solutions presented to an agent is independent of the quality of instructions provided with those solutions, or even whether instructions are provided with those solutions at all. Further as discussed above under the subheading “Remarks Regarding the Output Recited in Claim 41,” McCann’s teachings are actually incompatible with a system which has output comprising



multiple solutions, as is recited in claim 51. Therefore, because McCann neither teaches nor suggests the limitations of the first clause after the preamble of claim 51, or the limitations of the second from last clause of claim 51, applicants respectfully request that the rejection of claim 51 based on McCann be withdrawn.

#### Remarks Regarding Claim 68

Applicants note that the first clause after the preamble of claim 68 has been amended to recite “utilizing an expert system to obtain information from a customer regarding product needs of the customer via interaction between a live human agent and the customer.” Applicants further note that the Final Office Action cited lines 65 and 66 of column 1 of McCann as teaching the limitations of the first clause after the preamble of claim 68. As set forth above, lines 65-66 of column 1 of McCann describe relying on a knowledgeable VAR or technical consultant. Applicants note that the first clause after the preamble of claim 68 is now clear that the expert system is utilized to obtain information regarding product needs of the customer, and that the human agent is involved only to the extent that the expert system obtains the information via interaction between the human agent and the customer, which is very different from relying on a knowledgeable VAR or technical consultant, as is taught in the cited passage of McCann. Therefore, applicants respectfully request that the rejection of claim 68 based on McCann be withdrawn.

#### Remarks Regarding Claims 69 – 82

Applicants note that each of claims 69-82 depends from claim 68. Consequently, each of those claims incorporates the novel limitations of claim 68. Therefore, for at least the reasons set forth regarding claim 68, applicants respectfully request that the rejections of claims 69-82 based on McCann be withdrawn.

### Conclusion

Applicants submit that the above discussion does not constitute an exhaustive list of the novel limitations found in the pending claims which are not taught or suggested in the prior art of record. To the extent that applicants have not addressed certain aspects of the present rejection, please do not construe the same as an admission as to the merits of the rejections. Indeed, applicants reserve all rights with respect to arguments not explicitly raised herein. Further, to the extent that the amendments constitute a narrowing of the claims, such narrowing of the claims should not be construed as an admission as to the merits of the prior rejections. Indeed, applicants traverse the rejections and preserve all rights and arguments.

In light of the arguments made herein, it is respectfully submitted that the claims of the present application meet the requirements of patentability under 35 U.S.C. §§ 101, 112, and 102(e). Accordingly, reconsideration and allowance of these claims are earnestly solicited. Applicants encourage the Examiner to contact their representative, Ria Schalnatz at (513) 651-6167 or [rschalnat@fbtlaw.com](mailto:rschalnat@fbtlaw.com), if questions persist or if additional matters need to be dealt with prior to allowance.

The Commissioner for Patents is hereby authorized to charge any deficiency or credit any overpayment of fees to Frost Brown Todd LLC Deposit Account No. 06-2226.

Respectfully submitted,  
**Rod Mancisidor, et al.**

2007-06-15  
Date

By /Ria Farrell Schalnatz/  
Ria Farrell Schalnatz (Reg. 47,058)  
Attorney for Applicants  
FROST BROWN TODD LLC  
2200 PNC Center  
201 East Fifth Street  
Cincinnati, Ohio 45202  
(513) 651-6167